

[Title]

# Measurement of Elliptic Flow for High pT charged hadron at RHIC-PHENIX

[Abstract]

The calculations of Lattice Quantum-Chromo-Dynamic (QCD) predict the deconfined quarks and gluons state (QGP) at the energy density increase. Relativistic Heavy Ion Collider (RHIC) was constructed to produce such a high energy density matter and PHENIX is the one of the detector set which is designed to grasp some evidences of QGP state.

The azimuthal anisotropy on the particle emission is expected as a method to approach the proof of the QGP generation in the high-energy heavy-ions collision. The azimuthal anisotropy in the momentum space is considered as the reflection of an anisotropy of the source in the coordinate space at the early stage of collisions. Therefore, it is sensitive to the early stage and, is the observable that is affected from QGP. Especially, we can obtain information of jet quenching via azimuthal anisotropy in the high pT region where the jet quenching is as the following phenomenon. If there is a high-energy dense matter (such as QGP) at the stage of jet production, the jets lose their energy and its energy loss is proportional to the pass length in the dense matter. This jet quenching makes an azimuthal anisotropy in the high pT region.

In this talk, we will present the transverse momentum and centrality dependence of the azimuthal anisotropy of high pT charged hadrons in  $\sqrt{s_{NN}} = 200$  GeV Au+Au collisions at PHENIX. The relation of the jet quenching effect to the azimuthal anisotropy will be discussed.